

Application No. 10/597,555
Amendment dated June 18, 2009
Reply to Office Action of February 18, 2009

Docket No.: 20793/0205087-US0

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes Figs. 1-6.

Attachment: Five (5) Replacement Drawing sheets

REMARKS

Claims 34-66 are pending in the application. Claims 34-38, 41, 43, 50-55, 58 and 60 were rejected under 35 U.S.C. § 102(b) based on International Publication No. WO 02/05549 to Braun et al. ("Braun"). Claims 39-40, 42, 44-49, 56-57, 59, 61-66 were rejected under 35 U.S.C. § 103(a) based on Braun.

The claims have now been amended. Claims 35, 51 and 52 have now been cancelled. Reconsideration of the application in view of the amendment and the following remarks is respectfully requested.

Information Disclosure Statement

An Information Disclosure Statement is submitted herewith for the Examiner's consideration.

Status of the Drawings

The Office Action indicates that the drawings are missing. See Detailed Action, page 2, "Drawings" section. However, it is respectfully submitted that the drawings were part of International Patent Application No. PCT/EP2004/053659, of which the present application is a U.S. national phase application under 35 U.S.C. §371. The International Patent Application, and the drawings therein, should have been received from the International Bureau.

For convenience, five replacement drawings sheets including original Figs. 1-6 are submitted herewith. No new matter has been added.

Rejections Under 35 U.S.C. §§ 102 and 103

Claims 34-38, 41, 43, 50-55, 58 and 60 were rejected under 35 U.S.C. § 102(b) based on International Publication No. WO 02/05549 to Braun et al. ("Braun"). Claims 39-40, 42, 44-49, 56-57, 59, 61-66 were rejected under 35 U.S.C. § 103(a) based on Braun.

Braun describes a camera with an illuminator and a system for adjusting the intensity of the light that illuminates different zones of the scene to be photographed. See Braun, page 2, lines 29-31. The system allows light intensity to be reduced in areas where there is an undesirable amount of reflection, or the light directed at zones corresponding to a particular color to be intensified. See Braun, page 4, lines 4-22. A first image can be acquired using uniform lighting. The brightness values are then determined "such that the lighting differently illuminate the various regions of the field of view is adjusted to give a relatively flat (contrast-wise) image." See Braun, page 22, line 14-15. "Under this flattering illumination, a second image is acquired (208). Ideally, the intensity variations in this image are less than ± 0.5 of the intensity distance between the initial gray levels." See Braun, page 22, lines 20-22. Thereby, the gray levels of the acquisition levels and illumination levels are derived for a uniformly illuminated image. See Braun, page 22, lines 25-27.

Independent claim 34 of the present application has now been amended so as to recite an electronic circuit "including a memory unit configured to store a wavelength-dependent brightness distribution of an illumination field of the at least one lens, the wavelength-dependent brightness distribution corresponding to a shading effect of the at least one lens, and the electronic circuit configured to process, pixel-by-pixel, the detection light beam with the stored wavelength-dependent brightness distribution so as to provide a homogeneously illuminated image field."

Support for these amendments may be found in the Specification, for example, at paragraph [0016]. Independent claim 34 has also now been amended so as to include the features of dependent claim 35.

It is respectfully submitted that Braun fails to teach or suggest the above-recited features of claim 34. First, Braun does not disclose a memory unit configured to store a brightness distribution corresponding to a shading effect of at least one lens. In contrast, Braun is directed to a camera with a system for adjusting the intensity of the light that illuminates different zones of the scene to be photographed. See Braun, page 2, lines 29-31. The adjustments in intensity of the light make the yielded image have smaller variations in intensity by reducing the image intensity of highly reflective sections of the scene or have intensified colors. See Braun, page 4, lines 4-22. Nowhere does Braun teach or suggest that the variations in the intensity of the illumination light correspond to a shading effect, as recited in claim 34.

Further, Braun also does not disclose processing a detection light beam with a wavelength-dependent brightness distribution so as to provide a homogenously illuminated image field. In contrast, Braun describes forming a relatively flat (contrast-wise) image by varying the illuminating light. Thus, the illuminating light is varied such that the light detected by the camera has relatively uniform intensity. The detected light in Braun is not computed with a brightness distribution to form a homogenously illuminated image field, as the detected light is already "relatively flat" due to the variation in illuminating light. Further, because the light detected by the camera is relatively flat, there would be no reason to compute the light with a brightness distribution in order to form a homogenously illuminated image field.

Because Braun fails to teach or suggest the above-recited features of claim 34, it is respectfully submitted that it cannot anticipate or render claim 34, or any of its remaining dependent claims 36-49, obvious.

Independent claim 50 of the present application has now been amended so as to recite storing a "wavelength-dependent brightness distribution corresponding to a shading effect of the at least one lens," "employing the wavelength-dependent brightness distribution with the detected detection light beam so as to compute an image field with shading correction" and "directly controlling the intensity of the illuminating light beam as a function of the stored wavelength-dependent brightness distribution." Support for this amendment may be found in the Specification, for example, at paragraph [0016], and in dependent claims 51 and 52.

It is respectfully submitted that Braun fails to teach or suggest the above-recited features of claim 50. In contrast, Braun is directed to a camera with a system for adjusting the intensity of the light that illuminates different zones of the scene to be photographed. See Braun, page 2, lines 29-31. The adjustments in intensity of the light make the yielded image have smaller variations in intensity by reducing the image intensity of highly reflective sections of the scene or have intensified colors. See Braun, page 4, lines 4-22. Nowhere does Braun teach or suggest that the variations in the intensity of the illumination light correspond to a shading effect, as recited in claim 50. Moreover, Braun does not teach or suggest employing a brightness distribution with detection

light so as to compute an image field. In contrast, Braun only describes varying the illuminating light and does not teach or suggest using a brightness distribution to compute an image field.

Because Braun fails to teach or suggest the above-recited features of claim 50, it is respectfully submitted that it cannot anticipate or render claim 50, or any of its remaining dependent claims 53-66, obvious.

Reconsideration and withdrawal of the rejection of claims 34-38, 41, 43, 50-55, 58 and 60 under 35 U.S.C. § 102(b) based on Braun and of claims 39-40, 42, 44-49, 56-57, 59, 61-66 under 35 U.S.C. § 103(a) based on Braun is respectfully requested.

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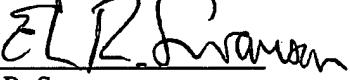
CONCLUSION

In view of the above amendment, applicants believe the pending application is in condition for allowance.

The Commissioner is hereby authorized to charge any unpaid fees deemed required in connection with this submission, including any additional filing or application processing fees required under 37 C.F.R. §1.16 or 1.17, or to credit any overpayment, to Deposit Account No. 04-0100.

Dated: June 18, 2009

Respectfully submitted,

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Attachments – Five (5) Replacement Drawing Sheets